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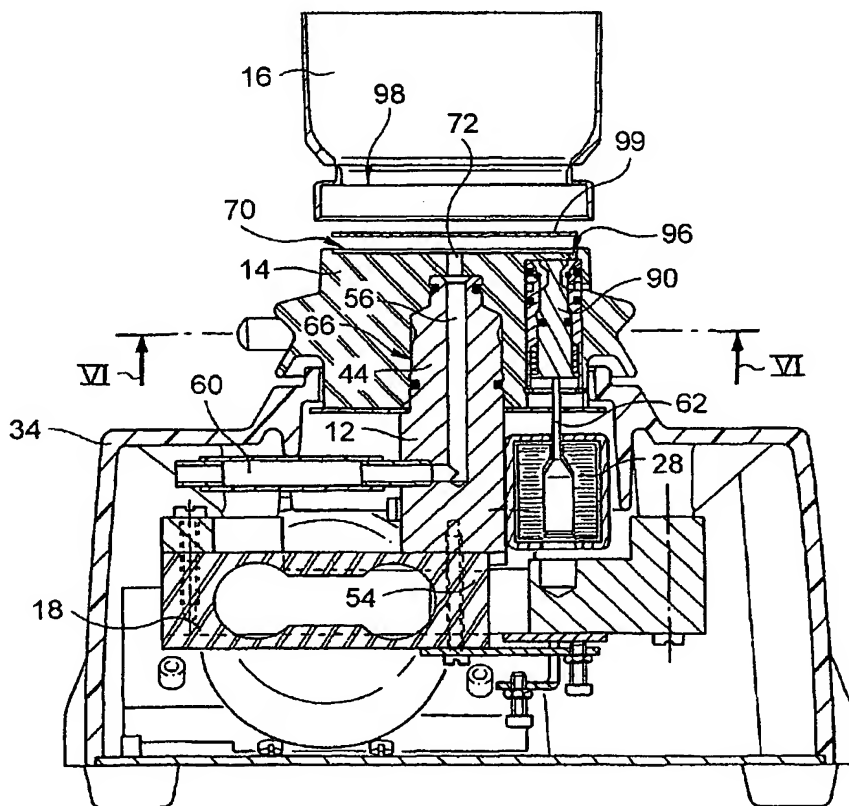
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(54) Title: A FILTER DEVICE INTEGRATING SAMPLED VOLUME CONTROL



(57) Abstract: The invention relates to a drainage device for a filter unit for microbiological testing of liquids, said drainage device including a mechanical support (10), which is adapted to receive a filter unit (16), and an suction pump (22) connected to said mechanical support to aspirate a liquid substance contained in said filter unit. The device comprises: a weight sensor (18) on which said mechanical support is mounted; a user interface (26) for entering data relating to drainage and/or said liquid substance; and a control unit (24) connected to said suction pump (22), the weight sensor (18) and said user interface (26), said control unit (24) being adapted to determine, from said data, at least a first weight corresponding to a first representative signal; and, when said weight sensor (18) supplies a signal corresponding to said first signal, said control unit (24) starts operation of said suction pump (22) so as to aspirate said liquid substance contained in said filter unit (16).

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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B01D61/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/068580 A (ENGENSEN DIEDERIK ;BIO MERIEUX INC (US); DIGUISEPPI JAMES L (US)) 6 September 2002 (2002-09-06) page 10, line 22 - page 11, line 17; figures 1-3	1
A	US 5 306 420 A (BISCONTE JEAN-CLAUDE) 26 April 1994 (1994-04-26) abstract	1
A	US 6 133 045 A (CHEN CHIH-CHUNG ET AL) 17 October 2000 (2000-10-17) figures 2,11,15,16	1
A	WO 01/048141 A (LEMONNIER JEAN ;MILLIPORE SA (FR)) 5 July 2001 (2001-07-05) abstract; figures 2,8,10	1
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 358 730 B1 (KANE JEFFREY) 19 March 2002 (2002-03-19) abstract; figure 11 -----	1

INTERNATIONAL SEARCH REPORT

PCT/IB 03/05116

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02068580	A	06-09-2002	WO 02068580 A2	06-09-2002
			US 2002127630 A1	12-09-2002
US 5306420	A	26-04-1994	FR 2657543 A1	02-08-1991
			AT 110291 T	15-09-1994
			DE 69103621 D1	29-09-1994
			DE 69103621 T2	23-03-1995
			DK 513139 T3	05-12-1994
			EP 0513139 A1	19-11-1992
			WO 9111245 A1	08-08-1991
			JP 3041641 B2	15-05-2000
			JP 5504405 T	08-07-1993
US 6133045	A	17-10-2000	NONE	
WO 0148141	A	05-07-2001	FR 2802942 A1	29-06-2001
			WO 0148141 A1	05-07-2001
			AU 1725601 A	09-07-2001
			EP 1240308 A1	18-09-2002
			JP 2003518375 T	10-06-2003
			US 2002192739 A1	19-12-2002
US 6358730	B1	19-03-2002	EP 1012327 A1	28-06-2000
			JP 2001510999 T	07-08-2001
			WO 9832875 A1	30-07-1998